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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,798	10/13/2005	Tokuo Tsuura	0445-0352PUS1	8677
2292	7590	06/01/2006		
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER CORDRAY, DENNIS R	
			ART UNIT	PAPER NUMBER
			1731	
DATE MAILED: 06/01/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/534,798

Applicant(s)

TSUURA ET AL.

Examiner

Dennis Cordray

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/12/05, 2/6/06</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2-7 and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagai et al (4069859).

Nagai et al discloses a heat resistant sheet used in casting that can be made on a papermaking machine. The sheet comprises inorganic fibers, silicate fillers, organic binders and organic fibers (Abs; col 4, lines 20-26; col 5, 24-29 and 61-68; col 7, lines 17-29). The silicate is in the form of extremely fine particles of siliceous material, such as silica flour, calcium silicate and sodium silicate (col 6, lines 18-20; col 12, lines 41-44, Example I). The organic fibers can be present in an amount up to 30% by weight, the inorganic fibers from 50-90%, the organic binder from 1-10% and the silicate from 10-50%. The silicate filler acts as an inorganic binder by increasing mutual bonding of the fibers and increasing tensile strength of the sheet (col 7, lines 58-64). The disclosed composition significantly overlaps and thus anticipates the claimed composition. The organic fiber can be wood or cotton fibers (paper fiber) (col 7, lines 25-27). Organic binders include epoxy resin and phenolic resin (col 5, line 68 to col 6, line 3). The melting point of the silicate filler is different than that of the organic binder. Nagai et al discloses a method for making the sheet comprising making the base paper using a conventional papermaking machine then forming a hollow tube from the sheet by lapping and winding by conventional methods (col 8, lines 49-62). Note that the claims do not recite that the tube is spirally wound. The binder can be mixed into the fiber

containing slurry before sheet formation or added to the formed sheet by impregnation (col 6, lines 4-10).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai et al in view of Brown et al (4981166).

Nagai et al does not specifically disclose that the casting part is disposed in casting sand.

Brown et al discloses a spirally wound paper tube used for a feed tube in a sand mold for molten metal in casting (Abs). The paper tube is disposed in a casting sand mold in a sprue or riser cavity (col 5, lines 13-24). Brown et al also teaches that a spirally wound tube is known to provide additional strength (col 8, lines 55-59).

The art of Nagai et al, Brown et al and the instant invention are analogous as pertaining to paper feed tubes used as parts in casting. It would have been obvious to a person of ordinary skill in the art to use the tube containing inorganic fibers, silicate fillers, organic binders and organic fibers of Nagai et al in view of Brown et al as a casting part disposed in casting sand as a standard and well-known method of casting.

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Conclusion

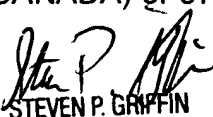
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure [Maine (5272006), Andersen et al (5830548), Wilson et al (6264045)]

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


DRC


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